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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/940,481
Filing Date: August 29, 2001
Appellant(s): COZAR ET AL.

MAILED

DEC 20 2004

GROUP 1700

Stefan U. Koschmieder
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed January 5, 2004.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is incorrect.

There is no amendment after final has been filed.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows: Instant appealed claims 1-8 are identical claims appealed in the parent application 08/641,233 (Appeal No. 1998-2219). The Board of Patent Appeals and Interferences has affirmed the rejection that claims 1-8 are unpatentable over USP 5234512 to Inoue et al in view of USP 5236522 to Fukuda et al or USP 4832908 to Ishikawa et al or USP 5164021 to Kato et al. The same rejection has been applied to all appealed claims in this application. Therefore, in view of ***Res Judicata***, the same

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appealed claims 1-8 which are affirmed by the Board of Appeals in the parent application should not be an issues.

Issue C is moot because the 35 U.S.C. § 112, second paragraph rejection has been withdrawn.

(7) *Grouping of Claims*

The appellant's statement in the brief that certain claims do not stand or fall together is not agreed with because they have substantially the same features but narrower ranges.

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

5,234,512	INOUE	8-1993
5,236,522	FUKUDA	8-1993
4,832,908	ISHIKAWA	5-1989
5,164,021	KATO	11-1992

(10) *Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1-18 contain different martensitic transformation start points. But the specification as originally filed fail to disclose how the recited martensitic transformation start points and thermal coefficient of expansion are being controlled or related to the claimed compositions and recited equations. It is unclear why the examples (A to D) in pages 6-7 of the instant specification have different martensitic transformation start points and thermal coefficients of expansion since compositions of all examples are in the claimed ranges and also complied with the claimed equations. There is no teaching to obtain the martensitic transformation start points less than -186 and/or thermal coefficients of expansion 0.49×10^{-6} to 0.7×10^{-6} .

Claim Rejections - 35 USC § 103

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-8 are rejected under 35 U.S.C. § 103 as being unpatentable over USP 5234512 to Inoue et al in view of USP 5236522 to Fukuda et al, USP 4932908 to Ishikawa et al, or USP 516402 1 to Kato et al (A11 references are cited in the parent application) and ***Res Judicata***.

Claims 9-18 are rejected under 35 U.S.C. § 103 as being unpatentable over USP 5234512 to Inoue et al in view of USP 5236522 to Fukuda et al, USP 4932908 to Ishikawa et al, or USP 516402 1 to Kato et al (A11 references are cited in the parent application).

The Inoue et al reference discloses the features including the claimed Fe-Ni shadow mask (abstract) and the conventional shadow mask processing steps such as etching and working (col. I, lines 47-57). The difference between the Inoue et al reference and the claims are as follows: The Fe-Ni alloy of Inoue et al does not contain Co element and Inoue et al do not disclose the claimed equation expressing the chemical composition of the alloy. However, it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art, In re Cooper and Foley 1943 C.D. 357, 553 O.G. 177; 57 USPQ 117, Taklatwalla v. Marburg, 620 O.G. 685, 1949 C.D. 77, and In re Pilling, 403 O.G. 513, 44 F(2) 878, 1

931 C.D. 75. In the absence of evidence to the contrary, the selection of the proportions of elements would appear to require no more than routine investigation by those ordinary skilled in the art. In re Austin, et al., 149 USPQ 685, 688.

With respect to the Co content, Fukuda et al (col. 2, lines 51 -57), Kato et al (col. 2, lines 46-50), and Ishikawa et al (col. 3, lines 24-30) teaches the benefit of adding Co to Fe-Ni shadow mask materials in the same field of endeavor or the analogous metallurgical art. Therefore, it would have been obvious to one having ordinary skill in the art of the cited references at the time the invention was made to provide Fe-Ni alloy as Inoue et al with Co element as taught by Fukuda et al (col. 2, lines 51-57), Kato et al (col. 2, lines 46-50), and Ishikawa et al (col. 3, lines 24-30) in order to improve the etching adaptability of the Fe-Ni shadow mask material. It has been held that combining known ingredient having known functions to provide a composition having the additive effect of each of the known functions is within realm of performance of ordinary skilled artisan and is not a patentable subject matter. In re Castner, I 86 USPQ 2 13, 2 1 7.

With respect to the etching step in the Inoue et al reference which is known in the art meant for drilling. See MPEP j 706.02(a); In re Malcolm, 1942 C.D. 589) 543 O.G. 440. With respect to the claimed martensitic transformation starting point and the thermal expansion coefficient as recited in independent claims that although the cited references do not disclose the claimed material properties; however, those properties as claimed would have been inherently possessed by the alloys of cited references because the claimed alloy composition is overlapped by the cited references as

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combined. The mere failure of the cited references to disclose all the advantages asserted by applicants is not substitute for actual differences in properties; see *In re DeBlauwe*, 222 USPQ 191, *In re Best*, 195 USPQ 430, and *In re Swinehart*, 169 USPQ 226. An apparently old composition cannot be converted into an unobvious one simply by the discovery of a characteristic that one cannot glean from the cited references; see *Titanium Metals Corp. Vs. Banner*, 227 USPQ 773, *In re King et al*, 43 USPQ 400, and *In re James*, 29 USPQ 431. It is well settled that when a claimed product appears to be substantially the same as a prior art product, the burden is on the applicant to prove that the product of the prior art does not necessarily or inherently possess characteristics attributed to the claimed product. *In re Spade*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990); *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977); and *In re Fessmann*, 180 USPQ 324.

(11) Response to Argument

Appellant's arguments filed January 5, 2004 have been fully considered but they are not persuasive.

Appellants' argument in pages 7-8 of instant brief is noted. But, the claimed 0.1 wt.% Mn is taught by Fukuda (col. 2, lines 10-15), Kato (col. 2, lines 1-10), and Ishikawa (abstract). There is no factual evidence showing the claimed Mn content is critical. Moreover, as is noted by the Board of Appeals in their decision, page 5, that

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insignificantly, Examples 4-7 of Fukuda exhibit the claimed average coefficient of thermal expansion between 20°C and 100°C. Accordingly, it would seem that the alloys of Fukuda reasonably appear to be essentially the same as those encompassed by the claims on appeal. In re Spada, 911 F.2d 705, 708, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990); In re Best, 562 F.2d 1252, 1255,

. The claimed average coefficient of thermal expansion between 20°C and 100°C has been disclosed.

Appellants' argument in pages 9-10 of the instant brief is noted. But, the examiner reiterates the statement in rejection above that Fukuda et al (col. 2, lines 51 - 57), Kato et al (col. 2, lines 46-50), and Ishikawa et al (col. 3, lines 24-30) teaches the benefit of adding Co to Fe-Ni shadow mask materials in the same field of endeavor or the analogous metallurgical art. Therefore, it would have been obvious to one having ordinary skill in the art of the cited references at the time the invention was made to provide Fe-Ni alloy as Inoue et al with Co element as taught by Fukuda et al (col. 2, lines 51-57), Kato et al (col. 2, lines 46-50), and Ishikawa et al (col. 3, lines 24-30) in order to improve the etching adaptability of the Fe-Ni shadow mask material. It has been held that combining known ingredient having known functions to provide a composition having the additive effect of each of the known functions is within realm of performance of ordinary skilled artisan and is not a patentable subject matter. In re Castner, 186 USPQ 2 13, 2 17.

Appellants' argument in paragraph bridging pages 10-11 of instant brief is noted. But appellants' attention is directed to examples 4-7 of Fukuda.

Appellants' argument in page 11 of instant brief is noted. But, composition of Example A also falls in the claimed composition ranges (see appealed claims 1 or 9). Moreover, as is set forth in the Board's decision on page 5 that

Appellants' specification, at page 5, discloses that the carbon content of the alloys should be at least 0.005% in order to achieve the claimed martensitic transformation start point (S_1), whereas the carbon content of Fukuda's Example 8 is only 0.002 wt.%. On the other hand, Examples 4-7 of Fukuda all contain carbon in the claimed amounts and, therefore, it is reasonable to conclude that the exemplified alloys possess the claimed martensitic transformation start point. Also, and not insignificantly, Examples 4-7 of Fukuda exhibit the claimed average coefficient of thermal expansion between 20°C and 100°C. Accordingly, it would seem that the alloys of Fukuda reasonably appear to be essentially the same as those encompassed by the claims on appeal. In re Spada, 911 F.2d 705, 708, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990); In re Bear, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

" Furthermore, there is no teaching in the instant specification that martensitic transformation start point could be obtained different from the teaching at page 5 of instant specification.

Appellants' argument as set forth in page 12 of instant brief is noted. But, the claimed elements have contents include zero which suggests said elements are optional/impurities and need not be disclosed by cited references.

Appellants' argument in page 13, first paragraph of instant brief is noted. But, page 5, lines 5-9 of instant specification does not teach/explain martensitic transformation start point "<-186°C". See below:

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so that, it is believed, the mean coefficient of expansion between 80°C and 130°C is less than $1 \times 10^{-6}/^{\circ}\text{K}$;

$$\text{Co} + 5 \times \text{Ni} \geq 165.5\%$$

so that, it is believed, the M_s point is less than -50°C.

5 It is also believed that in order for the mean coefficient of expansion between 20°C and 100°C to be less than or equal to $0.7 \times 10^{-6}/^{\circ}\text{K}$, it is preferable for each of the manganese, silicon and chromium contents to be less than or equal to 0.1%.

10 In order for the M_s point to remain below -50°C, it is believed that the alloy should contain at least 0.005% of carbon; however, the carbon content should not exceed 0.02% so that there is no deterioration in the ability to be shaped by drawing.

Appellants' argument as set forth in page 14 of instant brief is noted. But, it fails to set forth the enablement as required by 35 U.S.C. § 112, first paragraph which requires to disclose how martensitic transformation start point "<-186°C" is obtained.

For the above reasons, it is believed that the rejections should be sustained.

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Respectfully submitted,



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December 10, 2004

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